

**Amendments to claims:**

**This listing of claims will replace all prior versions and listing of claims in the application.  
Please amend claims 15, 16 and 21 as indicated.**

Claims 1-14 (cancelled).

Claim 15. (currently amended): A porous insulating film consisting essentially of a highly heat resistant polyimide resin film having a fine porous structure wherein:

- a) fine continuous channels reaching to both surfaces of the insulating film in a nonlinear fashion have a mean pore size of  $0.01 - 2 \mu\text{m}$  in the center of the film and  $0.14 - 2.8 \mu\text{m}$  at both surfaces of the film and a porosity of 15 – 80%;
- b) the polyimide resin film is prepared from a polyimide precursor solution and consists essentially of a polyimide obtained from the combination of at least one tetracarboxylic acid component and a diamine component; and
- c) the insulating film has
  - a thickness of  $5 - 150 \mu\text{m}$ ,
  - a resistance to passage of air of from 30 sec/100 cc to 2000 sec/100 cc and
  - a heat shrinkage of not greater than about  $\pm 1\%$  after being heat-treated at  $105^\circ\text{C}$  for 8 hours anddoes not contain a dense layer on either of the ~~any of its side~~ surfaces.

Claim 16. (currently amended): The porous insulating film according to claim 15, wherein the mean pore size in the center of the film is  $0.05 - 1 \mu\text{m}$ .

Claim 17. (previously presented): The porous insulating film according to claim 15, wherein the porosity is 30 – 80%.

Claim 18. (previously presented): The porous insulating film according to claim 15, wherein the thickness is  $5 - 100 \mu\text{m}$ .

Claim 19. (previously presented): The porous insulating film according to claim 15, which is fabricated by a film casting method.

Claim 20. (previously presented): The porous insulating film according to claim 15, which has a dielectric constant of no greater than 2.5.

Claim 21. (currently amended): A porous insulating film consisting essentially of a highly heat resistant polyimide resin film having a fine porous structure wherein:

a) fine continuous channels reaching to both surfaces of the insulating film in a nonlinear fashion have a mean pore size of  $0.01 - 2 \mu\text{m}$  in the center of the film and  $0.14 - 2.8 \mu\text{m}$  at both surfaces of the film; and

b) the polyimide resin film is prepared from a polyimide precursor solution and consists essentially of a polyimide obtained from the combination of at least one tetracarboxylic acid component and a diamine component and

c) the insulating film has

a thickness of  $5 - 100 \mu\text{m}$ ,

a resistance to passage of air of from 30 sec/100 cc to 2000 sec/100 cc,

a heat resistance temperature of at least  $200^{\circ}\text{C}$  and

a heat shrinkage of not greater than  $\pm 1\%$  after being heat-treated at  $105^{\circ}\text{C}$

for 8 hours and

does not contain a dense layer on either of the ~~any of its side~~ surfaces.

Claim 22. (previously presented): A battery separator comprising a porous insulating film according to claim 21.

Claim 23. (previously presented): The porous insulating film according to claim 15 or 21, wherein the tetracarboxylic acid component is selected from a biphenyltetracarboxylic dianhydride, pyromellitic dianhydride and a benzophenonetetracarboxylic dianhydride.

Claim 24. (previously presented): The porous insulating film according to claim 15 or 21, wherein the diamine component is selected from a phenylenediamine or a diaminodiphenylether.

Claim 25. (previously presented): The porous insulating film according to claim 15, wherein the pores in the porous structure are arranged in the film substantially parallel to the film surfaces.

Claim 26. (previously presented): The porous insulating film according to claim 23, wherein the biphenyltetracarboxylic dianhydride is 3,3',4,4'-biphenyltetracarboxylic dianhydride.

Claim 27. (previously presented): The porous insulating film according to claim 21, wherein the pores in the porous structure are arranged in the film substantially parallel to the film surfaces.